Amendments to the CLAIMS:

Without prejudice, this listing of the claims replaces all prior versions and listings of the claims in the present application:

LISTING OF CLAIMS:

1-60. (Canceled).

61. (Cancel).

62. (Currently Amended) ~~The method as claimed in claim 61,~~ A method for reading digital watermark data from digital data contents in which each bit of digital watermark data is embedded a plurality of times, said method comprising:

receiving digital data contents;

reading a digital watermark sequence from said digital data contents;

performing soft decision in code theory by assigning weights to said digital watermark sequence with a weighting function; and

reconstituting and generating digital watermark data from said digital watermark sequence;

wherein said weighting function is a distribution function obtained by a method including ~~comprising the steps of~~:

dividing first digital data contents into one or a plurality of first block data;

dividing second digital data contents into one or a plurality of second block data, said second digital data contents being obtained by manipulating said first digital data contents with a predetermined manipulation method;

transforming said first block data and said second block data into first frequency coefficients and second frequency coefficients respectively by applying an orthogonal transform; and

obtaining distribution of difference values between said first frequency coefficients and said second frequency coefficients, said distribution function being an approximation of said distribution,

wherein said weights are assigned to said digital watermark sequence according to values of said distribution function.

2

63. (Currently Amended) ~~The method as claimed in claim 61,~~ A method for reading digital watermark data from digital data contents in which each bit of digital watermark data is embedded a plurality of times, said method comprising:

receiving digital data contents;

reading a digital watermark sequence from said digital data contents;

performing soft decision in code theory by assigning weights to said digital watermark sequence with a weighting function; and

reconstituting and generating digital watermark data from said digital watermark sequence;

wherein said weighting function is a distribution function obtained by a method including ~~comprising the steps of~~:

dividing first digital data contents into one or a plurality of first block data;

dividing second digital data contents into one or a plurality of second block data, said second digital data contents being obtained by manipulating said first digital data contents with a predetermined manipulation method;

transforming said first block data and said second block data into first frequency coefficients and second frequency coefficients respectively by applying an orthogonal transform; and

obtaining said distribution function on the basis of a theory if distribution of difference values between said first frequency coefficients and said second frequency coefficients, can be obtained by said theory,

wherein said weights are assigned to said digital watermark sequence according to values of said distribution function.

64. (Cancel).

65. (Currently Amended) ~~The apparatus as claimed in claim 64,~~ An apparatus for reading digital watermark data from digital data contents in which each bit of digital watermark data is embedded a plurality of times, said apparatus comprising:

means for receiving digital data contents;

means for reading a digital watermark sequence from said digital data contents;

means for performing soft decision in code theory by assigning weights to said digital watermark sequence with a weighting function; and

means for reconstituting and generating digital watermark data from said digital watermark sequence;

wherein said weighting function is a distribution function obtained by means including comprising:

means for dividing first digital data contents into one or a plurality of first block data;

means for dividing second digital data contents into one or a plurality of second block data, said second digital data contents being obtained by manipulating said first digital data contents with a predetermined manipulation method;

means for transforming said first block data and said second block data into first frequency coefficients and second frequency coefficients respectively by applying an orthogonal transform; and

means for obtaining distribution of difference values between said first frequency coefficients and said second frequency coefficients, said distribution function being an approximation of said distribution,

wherein said weights are assigned to said digital watermark sequence according to values of said distribution function.

66. (Currently Amended) The apparatus as claimed in claim 61, An apparatus for reading digital watermark data from digital data contents in which each bit of digital watermark data is embedded a plurality of times, said apparatus comprising:

means for receiving digital data contents;

means for reading a digital watermark sequence from said digital data contents;

means for performing soft decision in code theory by assigning weights to said digital watermark sequence with a weighting function; and

means for reconstituting and generating digital watermark data from said digital watermark sequence;

wherein said weighting function is a distribution function obtained by means including comprising:

means for dividing first digital data contents into one or a plurality of first block data;

means for dividing second digital data contents into one or a plurality of second block data, said second digital data contents being obtained by manipulating said first digital data contents with a predetermined manipulation method;

means for transforming said first block data and said second block data into first frequency coefficients and second frequency coefficients respectively by applying an

orthogonal transform; and

means for obtaining said distribution function on the basis of a theory if distribution of difference values between said first frequency coefficients and said second frequency coefficients, can be obtained by said theory,

wherein said weights are assigned to said digital watermark sequence according to values of said distribution function.

67. (Cancel).

68. (Currently Amended) ~~The integrated circuit as claimed in claim 67,~~ An integrated circuit for reading digital watermark data from digital data contents in which each bit of digital watermark data is embedded a plurality of times, said integrated circuit comprising:

means for receiving digital data contents;

means for reading a digital watermark sequence from said digital data contents;

means for performing soft decision in code theory by assigning weights to said digital watermark sequence with a weighting function; and

means for reconstituting and generating digital watermark data from said digital watermark sequence;

wherein said weighting function is a distribution function obtained by means including ~~comprising~~:

means for dividing first digital data contents into one or a plurality of first block data;

means for dividing second digital data contents into one or a plurality of second block data, said second digital data contents being obtained by manipulating said first digital data contents with a predetermined manipulation method;

means for transforming said first block data and said second block data into first frequency coefficients and second frequency coefficients respectively by applying an orthogonal transform; and

means for obtaining distribution of difference values between said first frequency coefficients and said second frequency coefficients, said distribution function being an approximation of said distribution,

wherein said weights are assigned to said digital watermark sequence according to values of said distribution function.

5

69. (Currently Amended) ~~The integrated circuit as claimed in claim 67,~~ An integrated circuit for reading digital watermark data from digital data contents in which each bit of digital watermark data is embedded a plurality of times, said integrated circuit comprising:

        means for receiving digital data contents;

        means for reading a digital watermark sequence from said digital data contents;

        means for performing soft decision in code theory by assigning weights to said digital watermark sequence with a weighting function; and

        means for reconstituting and generating digital watermark data from said digital watermark sequence;

        wherein said weighting function is a distribution function obtained by means including ~~comprising~~:

        means for dividing first digital data contents into one or a plurality of first block data;

        means for dividing second digital data contents into one or a plurality of second block data, said second digital data contents being obtained by manipulating said first digital data contents with a predetermined manipulation method;

        means for transforming said first block data and said second block data into first frequency coefficients and second frequency coefficients respectively by applying an orthogonal transform; and

        means for obtaining said distribution function on the basis of a theory if distribution of difference values between said first frequency coefficients and said second frequency coefficients, can be obtained by said theory, and

        wherein said weights are assigned to said digital watermark sequence according to values of said distribution function.

70. (Cancel)

71. (Currently Amended) ~~The computer readable medium as claimed in claim 70,~~ A computer readable medium storing program code for causing a computer system to read digital watermark data from digital data contents in which each bit of digital watermark data is embedded a plurality of times, said computer readable medium comprising:

        program code means for receiving digital data contents;

        program code means for reading a digital watermark sequence from said digital data contents;

        program code means for performing soft decision in code theory by assigning weights

to said digital watermark sequence with a weighting function; and

program code means for reconstituting and generating digital watermark data from said digital watermark sequence;

wherein said weighting function is a distribution function obtained by program code means including comprising:

program code means for dividing first digital data contents into one or a plurality of first block data;

program code means for dividing second digital data contents into one or a plurality of second block data, said second digital data contents being obtained by manipulating said first digital data contents with a predetermined manipulation method;

program code means for transforming said first block data and said second block data into first frequency coefficients and second frequency coefficients respectively by applying an orthogonal transform; and

program code means for obtaining distribution of difference values between said first frequency coefficients and said second frequency coefficients, said distribution function being an approximation of said distribution,

wherein said weights are assigned to said digital watermark sequence according to values of said distribution function.

72. (Currently Amended) The computer readable medium as claimed in claim 70, A computer readable medium storing program code for causing a computer system to read digital watermark data from digital data contents in which each bit of digital watermark data is embedded a plurality of times, said computer readable medium comprising:

program code means for receiving digital data contents;

program code means for reading a digital watermark sequence from said digital data contents;

program code means for performing soft decision in code theory by assigning weights to said digital watermark sequence with a weighting function; and

program code means for reconstituting and generating digital watermark data from said digital watermark sequence;

wherein said weighting function is a distribution function obtained by program code means including comprising:

program code means for dividing first digital data contents into one or a plurality of first block data;

program code means for dividing second digital data contents into one or a plurality of second block data, said second digital data contents being obtained by manipulating said first digital data contents with a predetermined manipulation method;

program code means for transforming said first block data and said second block data into first frequency coefficients and second frequency coefficients respectively by applying an orthogonal transform; and

program code means for obtaining said distribution function on the basis of a theory if distribution of difference values between said first frequency coefficients and said second frequency coefficients, can be obtained by said theory, and

wherein said weights are assigned to said digital watermark sequence according to values of said distribution function.